

battery configured to provide starting energy to a vehicle; a charge supply battery configured to provide a supply voltage; and a DC-DC converter circuit having an input electrically coupled to the charge supply battery and an output electrically coupled to the booster battery, wherein the charge supply battery is of a different type and construction than the booster battery.” (Emphasis Added.)

The Office Action suggests that in Palfey, which is directed to a vehicle electrical power backup circuit and method, the combination of the car battery, item 40 and item 14 of figure 1 show the above elements and limitations of claims 1 and 23. Applicant respectfully points out that, in figure 1 of Palfey, item 40 is only connected to battery 14 and is independent of any other battery in the apparatus of Palfey. Such a circuit is suitable for the electrical power backup system of Palfey, but is unrelated to, and unsuitable for, the claimed invention.

In summary, Palfey teaches or suggestions nothing about a DC-DC converter circuit having an input electrically coupled to a charge supply battery and an output electrically coupled to a storage battery (or booster battery), which is of a different type and construction than the charge supply battery. Therefore, claims 1 and 23 are non-obvious and allowable over Palfey et al.

In section 4 of the Office Action, claims 2-3, 6-18 and 82-94 were rejected under 35 U.S.C. §103(a) as being unpatentable over Palfey et al., in combination with Barrett, U.S. Patent No. 5,684,678.

For reasons provided above, Palfey et al. does not teach or suggested a DC-DC converter circuit having an input electrically coupled to a charge supply battery and an output electrically coupled to a storage battery (or a booster battery), which is of a different type and construction than the charge supply battery. Barrett does not overcome the deficiencies of Palfey et al. Thus, claims 2-3, 6-18 and 82-94 are non-obvious and allowable over the combination of Palfey et al. and Barrett.

In Section 5 of the Office Action, claims 36-41 and 95-100 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tomantschger, U.S. Patent No. 5,637,978 in combination with a paper published by Electronix Express (a non patent publication, November 10, 1998) and Bertness, U.S. Patent No. 6,249,124.

None of the above references taken alone or in combination teach or suggest a DC-DC

converter circuit having an input electrically coupled to a charge supply battery and an output electrically coupled to a storage battery (or booster battery), which is of a different type and construction than the charge supply battery. Thus, claims 36-41 and 95-100 are non-obvious and allowable over the cited art.


In Section 6 of the Office Action, method claims 46-64, 69-77 and 101-111, were rejected for the same reasons in the earlier sections in connection with the apparatus claims. For reasons provided above, Applicant believes that method claims 46-64, 69-77 and 101-111 are non-obvious and allowable over the cited art. Further, independent method claims 46 includes "providing a charging voltage to the storage battery as a function of the supply voltage, with the charging voltage having a magnitude greater than a magnitude of supply voltage." Palfey et al. teaches or suggestions nothing in connection with this element. The remaining references do not compensate for the deficiencies of Palfey et al.

In view of the foregoing, Applicant respectfully requests reconsideration and allowance of all pending claims 1-18, 23-41, 46-64, 69-77 and 82-111. Favorable action upon all claims is solicited.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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